

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A ~~light-receiving~~ detecting element module ~~which detects signal light emitted from an optical fiber,~~ comprising:

a lens ~~which condenses~~ condensing signal light emitted from ~~the~~ an optical fiber;

a reflecting mirror ~~which has~~ having a quadric reflecting surface ~~which reflects,~~ an axis, and a center intersected by the axis, the reflecting mirror reflecting the signal light condensed by the lens; and

~~a light~~ light detecting element ~~which detects~~ detecting the signal light reflected by the reflecting mirror and ~~converts~~ converting the signal light into an electrical signal, wherein

the signal light condensed by the lens is incident on the quadric reflecting surface generally parallel to the axis of the quadric reflecting surface, and

the signal light incident on the quadric reflecting surface within approximately one-half radius of the center of the quadric reflecting surface is reflected at approximately a right angle to the axis of the quadric reflecting surface.

2. (Currently Amended) The ~~light-receiving~~ detecting element module according to claim 1, wherein a real image, at an emitting point of the signal light in the optical fiber, is imaged by the lens, ~~with respect to~~ form a virtual image ~~of~~ at a light detecting face of the light detecting element, ~~formed~~ on an optical axis of the lens by, with the reflecting mirror.

3. (Currently Amended) The light-~~receiving~~ detecting element module according to claim 1, wherein the quadric reflecting-mirror surface is a parabolic ~~mirror having an axis~~.

Claims 4 and 5 (Cancelled).

6. (Currently Amended) The light-~~receiving~~ detecting element module according to claim 1, wherein the quadric reflecting-mirror surface is a hyperboloid ~~mirror~~.

7. (Currently Amended) The light-~~receiving~~ detecting element module according to claim 1, wherein the lens is a spherical lens.

8. (Currently Amended) The light-~~receiving~~ detecting element module according to claim 1, further comprising a trans-impedance amplifier located on a common plane with the light detecting element, proximate the light detecting element, and ~~that amplifies~~ amplifying the electrical signal produced by the light detecting element.

9. (Currently Amended) The light-~~receiving~~ detecting element module according to claim 1, wherein the reflecting mirror is formed using a plastic mold.

10. (Currently Amended) The light-~~receiving~~ detecting element module according to claim 1, including adjusting the optical fiber along an optical axis direction and in two directions perpendicular to the optical axis direction.

11. (Currently Amended) The light-~~receiving~~ detecting element module according to claim 1, wherein
the lens has a magnification of at least one and no more than three,

the reflecting mirror has a magnification of at least $1/6$ and no more than one,
and
overall magnification, including the lens and the reflecting mirror is at least 0.5
and no more than one.

12. (Currently Amended) The ~~light-receiving~~ detecting element module according to claim 1, wherein the reflecting mirror has a radius of curvature and a focal length, one of which is no more than 1 millimeter.

13. (Currently Amended) The ~~light-receiving~~ detecting element module according to claim 8, further comprising a capacitor having a ground electrically connected to a ground of the trans-impedance amplifier, wherein the light detecting element, the trans-impedance amplifier, and the capacitor are arranged in substantially the same plane.

14. (Currently Amended) The ~~light-receiving~~ detecting element module according to claim 8, further comprising:
a base; and
a capacitor on which the light detecting element is mounted and having a back face connected to a ground face of the base.

15. (Currently Amended) A ~~light-receiving~~ detecting element module ~~which detects signal light emitted from an optical fiber~~, comprising:
a stem through which signal pins penetrate;
a base fixed in a direction perpendicular to the stem;
a cap member having a ~~light-passing-through~~ passing through hole and fixed to the stem;
a spherical lens inserted into the ~~light-passing-through~~ passing through hole and condensing signal light emitted from ~~the~~ an optical fiber;

a parabolic mirror located on the base and reflecting the signal light condensed by the spherical lens at approximately a right angle, wherein;

the spherical lens has a magnification of at least one and no more than three,

the parabolic mirror has a magnification of at least 1/6 and no more than one, and

overall magnification, including the spherical lens and the parabolic mirror is at least 0.5 and no more than one;

a light detecting element located on the base, receiving the signal light reflected by the parabolic mirror, and converting the signal light ~~to~~ received into an electrical signal; and

a trans-impedance amplifier located on the base proximate the light detecting element and amplifying the electrical signal produced by the light detecting element.

16. (Currently Amended) A ~~light-receiving~~ detecting element module ~~which detects signal light emitted from an optical fiber,~~ comprising:

a stem through which signal pins penetrate;

a base fixed in a direction perpendicular to the stem;

a cap member having a first light-passing through hole and fixed to the stem;

a window member covering the first light ~~passing through~~ passing through hole;

a lens holding member having a second light ~~passing through~~ passing through hole and fixed to the cap member;

a spherical lens inserted into the second light ~~passing through~~ passing through hole and condensing signal light emitted from the optical fiber;

a parabolic mirror located on the base and reflecting the signal light condensed by the spherical lens at approximately a right angle;

a light detecting element located on the base, receiving the signal light reflected by the parabolic mirror, and converting the signal light ~~to~~ received into an electrical signal; and

a trans-impedance amplifier located on the base proximate the light detecting element and amplifying the electrical signal produced by the light detecting element, wherein

the spherical lens has a magnification of at least one and no more than three,

the parabolic mirror has a magnification of at least 1/6 and no more than one, and

overall magnification, including the spherical lens and the parabolic mirror is at least 0.5 and no more than one.